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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,179	10/30/2003	Thomas W. Kenny	COOL-01302	2504

28960 7590 03/27/2007  
HAVERSTOCK & OWENS LLP  
162 NORTH WOLFE ROAD  
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EXAMINER
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FORD, JOHN K

ART UNIT	PAPER NUMBER
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3744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	03/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/698,179	<b>Applicant(s)</b> KENNY ET AL.	
	<b>Examiner</b> John K. Ford	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/16/07
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4, 5, 8-27, 29-33, 35-127 is/are pending in the application.
- 4a) Of the above claim(s) 45-127 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

On page 19 of the response of August 23, 2006, applicant alleges that the examiner gave applicant an incomplete list of species from which to elect which thereby “deprives the Applicants the full scope of their invention”. The examiner tried very hard not to do this, but with literally hundreds of un-illustrated variants disclosed in the specification it was almost inevitable that some permutation or combination of the species that were illustrated would be omitted from the list. That problem will be corrected here. Since applicant has already clearly elected Figures 3A-3B, only those Figures are addressed here.

This application contains claims directed to the following patentably distinct species of Figures 3A-3B:

First species of Figure 3A-3B, with microchannel walls 110 as the interface layer 102 **as shown** without any of the un-illustrated variation(s) disclosed in the written specification but not shown Figures 3A-3B,

Second species of Figure 3A-3B, with some alternative interface layer (other than microchannel walls 110) of as disclosed on page 22, lines 19-22 of the specification but not illustrated in Figures 3A-3B,

Third species as described on page 16, second paragraph, of the amendment after final of January 16, 2007 wherein applicant “maintains that the interface layer [102,

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comprised of elements 110] of Figures 3A-3B and the alternative microporous structure [including, but not limited to roughed surfaces and a micro-porous structure, such as sintered metal and silicon foam] are not mutually exclusive.

In the event the second or the third species (above) is elected, applicant is required to further elect one of the following alternative sub-species:

first sub-species of roughed surfaces,

second sub-species of micro-porous structure of sintered metal,

third sub-species of micro-porous structure of silicon foams or

an in-determinant number of additional sub-species as suggested by the words “but not limited to” in the aforementioned phrase: “It is also apparent that any other features, besides microchannel walls 110 are also contemplated, including, but not limited to roughed surfaces and a micro-porous structure, such as sintered metal and silicon foam”

In the event the second or the third species (above) is elected, with whatever sub-species is elected, a **proposed drawing correction FULLY illustrating that species and sub-species is required in response to this action.**

The proposed drawing must be at least as detailed as Figure 3A-3B and must clearly illustrate both the species elected and sub-species elected. This drawing will be carefully scrutinized for new matter and the examiner, in requiring it, does not waive any right to make a new matter rejection if that elected species and sub-species (and their use in conjunction with one another) is not fully supported by the original disclosure.

The species are independent or distinct because they appear to have mutually exclusive constructions (which the examiner will be able to determine once the proposed drawing correction is received) that require different sub-classes to be searched. Porous materials are searched in different classes and sub-classes than fins.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, the examiner is unsure if any claim is generic, because the nature of the species and their relationship to one another is completely unclear.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the

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record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Counsel has in the past stated that Figure 10A, another distinct species from Figure 3B (see office action of July 20, 2006 where Figure 3B and Figure 10A were listed as first and second species of the interface layer") can be combined with Figure 3A-3B and has argued that the statement on page 22, lines 19-22 of the specification imports all of the structure of the microporous structure 301 disclosed in Figure 10A, but omits the pillars 303 of Figure 10A.

The examiner does not believe that the application as filed supports this borrowing selected features of disparate species in this manner just described and any claim encompassing these unsupported "mix and match" species will be rejected as constituting new matter.

The examiner has also previous stated: "Be forewarned, however, if this continues to be a burden on the examiner, the examiner may require a further election of species between the interface layer of Figures 3A-3B as shown (i.e. microchannel walls 110 of the interface layer 102) and the alternative interface layer of "a microporous structure, such as sintered metal and silicon foam" as disclosed on page 22, lines 19-22 of the specification as an alternative construction for the interface layer 102

of Figures 3A-3B, since these two constructions are mutually exclusive. If applicant maintains that the interface layer of Figures 3A-3B as shown (i.e. microchannel walls 110 of the interface layer 102) and the alternative interface layer of "a micro-porous structure, such as sintered metal and silicon foam" as disclosed on page 22, lines 19-22 of the specification as an alternative for the interface layer 102 of Figures 3A-3B are not mutually exclusive, specific reference to the specification by page and line number for where support that the two constructions can be used together at the same time (i.e. not as alternatives to one another) is required in response to this office action."

The specification on page 22, lines 19-22, it states with respect to elected Figures 3A-3B: "It is also apparent that any other features, besides microchannel walls 110 are also contemplated, including, but not limited to roughed surfaces and a micro-porous structure, such as sintered metal and silicon foam". There is no evidence to support that the material disclosed at 301 in Figure 10A is in fact the one contemplated on page 22, lines 19-22.

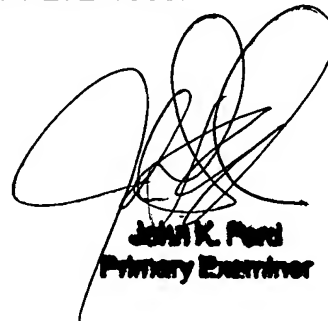
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**John K. Ford**  
**Primary Examiner**